

**ASSISTANT SECRETARY OF THE ARMY  
FOR ACQUISITION, LOGISTICS AND  
TECHNOLOGY (ASA(ALT))**



**INDUSTRY OPPORTUNITIES**



## U.S. ARMY MODERNIZATION PRIORITIES

In October 2017, the Army initiated a realignment of modernization responsibilities. This realignment involved the establishment of a pilot program consisting of eight Cross-Functional Teams (CFTs) aligned with the Army's six Modernization Priorities. The CFTs are led by warfighters with combat experience and given the task to develop a requirement — informed by experimentation and technical demonstrations — through teaming, agility and rapid feedback. This enables the development of a capability document and improves the decision-making for a potential program of record to regain overmatch over our near-peer competitors. Each CFT (listed below) includes program management, finance, testing, science and technology and other components.

Foundational technology developments will continue to grow in importance as the Army becomes more expeditionary to maintain its globally responsive posture. Future land operations against more capable and lethal state and sub-state disruptors, regional peers and a sophisticated global peer military will demand technologies that facilitate greater levels of mobility, lethality, communications and disaggregated small unit and Soldier performance. The Army will need these technologies to deploy along contested lines of communication and win against a technologically sophisticated global peer military power. In particular, high-interest areas that are anticipated to impact future operations include:

- Air and Missile Defense
  - Army Network
  - Assured Positioning, Navigation, and Timing
  - Future Vertical Lift
  - Long-Range Precision Fires
  - Next Generation Combat Vehicle
  - Soldier Lethality
  - Synthetic Training Environment
- **Long-Range Precision Fires** will provide massed, mobile, operational-level kinetic and non-kinetic strike options to restore overmatch and improve deterrence on a complex, contested and expanded battlefield.
  - **Next Generation Combat Vehicle** will develop replacements for current tanks and infantry fighting vehicles that realize weight, sustainment and cost-per-unit savings. This will increase the capability of our existing formations and improve our ability to survive and win in the complex and densely urbanized terrain of an intensely lethal and distributed battlefield where all domains are continually contested.
  - **Future Vertical Lift** will develop replacement aviation platforms that include unmanned and autonomous attack, reconnaissance, utility and medical evacuation with increased speed and extended range and station time to operate in complex, dense urban terrain on an intensely lethal, distributed and expanded battlefield within contested air space.
  - **Network** with hardware, software and infrastructure to provide resilient mission command on the move to wage the maneuver intelligence, surveillance and reconnaissance; joint fires; and sustainment fights to retain and exploit the initiative against a peer adversary in an inherently contested cyber and electromagnetic environment.
  - **Air and Missile Defense** will reduce the cost curve of missile defense, restore overmatch, survive volley-fire attacks and operate within sophisticated anti-access/area denial and contested domains.
  - **Soldier Lethality** will improve Soldier and small-unit performance, reduce surprise, increase protection and enhance lethality in close combat on an intensely lethal and distributed battlefield and within complex, urban terrain.

Realization of these aims is expected to have significant implications for future Army operations. To enable these goals, the Army is focused on discovery, innovation and transition of technologies that will facilitate land force capabilities from the near-term into the deep future and enable power projection into, and operations within, contested environments.

Success in this multifaceted environment is critically dependent on collaboration with the private sector, including traditional and nontraditional defense sector partners. This booklet provides a summary of engagement opportunities for the private sector to work with the Army. Below are some frequently asked questions. More information on each program can be found on the individual program page.

Question	Answer
I have innovative ideas, and I'm a small business. How do I work with the Army?	The Small Business Innovation Research (SBIR), Small Business Technology Transfer (STTR), Broad Agency Announcement (BAA) and xTech Search sections describe these programs and provide details on who to contact to begin the process.
I'm a large business with a great idea. What's the best way for me to work with the Army?	See the BAA and Other Transactional Authority (OTA) sections to find out how to begin working with the Army.
I'm in academia and want to work with the Army. What's the best way for me to do that?	Go to the STTR, BAA and OTA sections to learn about the programs available to you.
I'm a nontraditional business with an innovative idea that meets one of the Army's Modernization Priorities. What should I do?	Our SBIR, STTR, BAA, OTA and xTech Search programs will be the best fit for nontraditional business. Please see these sections for more information on these programs.
How do I work with small businesses?	The SBIR and STTR sections will tell you how to best work with small businesses.
I'm interested in working with academia and labs. What's the best way to do that?	The STTR program works with academia. For more information, see the STTR section.  For information on how to work with labs, see the LABS and Open Campus sections.
I have a great idea that I'd like to run myself with no additional partners.	BAAs and OTAs are the best option for you. Please refer to the BAA and OTA sections.
How do I get Intellectual Property (IP) protections for my idea(s)/ prototypes/inventions?	The Army IP Management Policy safeguards investments made by the government, industry and academia. See the Technology Transfer section for more information on IP rights.

## ARMY SMALL BUSINESS INNOVATION RESEARCH (SBIR)

### OVERVIEW

The Army's Small Business Innovation Research (SBIR) Program allows small, high-tech U.S. businesses with less than 500 employees the opportunity to provide innovative Research and Development (R&D) solutions to critical Army technology requirements. The SBIR Program benefits the Department of Defense (DoD), the private sector, our national economy and, most importantly, our Soldiers.

Congress initiated the SBIR program in 1982 to increase small business participation in federal R&D. The three-phased program stimulates technological innovation, integrates small business-developed inventions into defense systems and increases commercial application of Army sponsored R&D:

- **Phase I:** Establish technical merit, feasibility and commercial potential of proposed R&D efforts
- **Phase II:** Evaluate scientific/technical merit and commercial potential; projects often produce and demonstrate a prototype
- **Phase III:** Pursuit of commercialization opportunities

### MISSION

The Army SBIR and Small Business Technology Transfer (STTR) programs allow small, high-tech U.S. businesses and academia the opportunity to provide innovative R&D solutions in response to critical Army needs.

### VISION

To be the Army's premier source of innovative technology solutions, providing direct access to America's high-tech small business R&D community, enabling our Soldiers deployed around the world.

### TECHNOLOGY AREAS OF INTEREST

- Advanced Materials and Manufacturing
- Microelectronics and Photonics
- Sensors and Information Processing
- Simulation and Modeling for Acquisition, Requirements and Training (SMART)
- Engineering Sciences
- Advanced Propulsion Technologies
- Power and Directed Energy
- Biological, Chemical and Nuclear Defense
- Life, Medical and Behavioral Sciences

### GOALS

1. Stimulate technological innovation.
2. Use small businesses to meet federal R&D needs.
3. Foster and encourage participation by socially and economically disadvantaged small business concerns (SBCs), and by SBCs that are 51 percent owned and controlled by women, in technological innovation.
4. Increase private sector commercialization of innovations derived from federal R&D; thereby increasing competition, productivity and economic growth.

## PHASES

Phase I	Phase II	Phase III
Feasibility study, proof of concept	Full R&D effort	Commercialization
6 Months: \$100,000 max (plus a 4-month, \$50,000 option, at government's discretion)	2 Years: \$1,000,000 max	Unlimited time, non-SBIR funding

## KEY ELIGIBILITY REQUIREMENTS

1. Company must be a U.S. for-profit small business of 500 or fewer employees.
2. All work must be performed in the U.S., including subcontractors.
3. In Phase I, a minimum of  $\frac{2}{3}$  of the effort must be performed by the proposing small business.
4. In Phase II, a minimum of  $\frac{1}{2}$  of the effort must be performed by the proposing small business.
5. The Principal Investigator on the project must spend more than  $\frac{1}{2}$  of his/her time employed by the small business.

## SOLICITATION SCHEDULE

Each year, the Army SBIR Program issues three Phase I SBIR solicitations. The solicitations include topics written by participating Army organizations (including labs and Program Executive Offices), which describe R&D needs that can be addressed by small businesses. Current and past topics can be found on the DoD SBIR/STTR website at: <https://sbir.defensebusiness.org/topics>.

## UPCOMING SCHEDULE

Solicitation	Pre-Release	Open	Close
20.1	26 Nov 19	8 Jan 20	12 Feb 20
20.2	22 Apr 20	20 May 20	17 Jun 20
20.3	25 Aug 20	23 Sep 20	22 Oct 20

## TRANSITION

The intention of SBIR is that each company receiving an investment of SBIR funds during Phase I and II should be prepared to compete in the commercial marketplace in Phase III. The Army has established formal transition assistance programs, including Technical Assistance and Transition Support (Phase II Enhancements).

## SUGGEST A TOPIC

Don't see a topic within your technology area? Email the helpdesk: [usarmy.apg.rdecom.mbx.sbir-program-managers-helpdesk@mail.mil](mailto:usarmy.apg.rdecom.mbx.sbir-program-managers-helpdesk@mail.mil) to suggest a topic. Suggested topics are reviewed and taken into consideration based on Army needs for future solicitations.

For more information, visit <https://www.armysbir.army.mil> or contact the SBIR Program Manager at 866-570-7247 or [usarmy.apg.rdecom.mbx.sbir-program-managers-helpdesk@mail.mil](mailto:usarmy.apg.rdecom.mbx.sbir-program-managers-helpdesk@mail.mil).

# SMALL BUSINESS TECHNOLOGY TRANSFER RESEARCH (STTR)

## OVERVIEW

The Small Business Technology Transfer (STTR) program is a government program, mandated by the Small Business Research and Development Enhancement Act of 1992, PL102-564. STTR was established in Fiscal Year (FY) 1994 as a three-year pilot program and has been authorized permanently. The 2018 STTR budget is determined by a set-aside of 0.45 percent of the Army's extramural R&D budget. STTR was established as a companion program to the SBIR program and is executed in essentially the same manner. However, there are distinct differences.

While STTR has the same objectives as SBIR regarding the involvement of small businesses in federal R&D and the commercialization of their innovative technologies, the STTR program requires participation by universities, federally funded research and development centers (FFRDCs), or other non-profit research institutions.

Each STTR proposal must be submitted by a team, which includes a small business (as the prime contractor for contracting purposes) and at least one research institution. The project must be divided such that the small business performs at least 40 percent of the work and the research institution(s) performs at least 30 percent of the work. The remainder of the work may be performed by either party or a third party.

## GOALS

The goal of the Army STTR Program is to use small businesses in partnership with research institutions to develop innovative solutions that address Army technology needs.

- Largest source of early stage R&D funds for Small Businesses — not a loan
- Company retains data rights for five years
- Builds company's research credibility

## PHASES

Phase I	Phase II	Phase III
Feasibility study, proof of concept	Full R&D effort	Commercialization
6 months: \$150,000	Up to 2 years; \$1,000,000	Unlimited time, non-STTR funding

## KEY ELIGIBILITY REQUIREMENTS

- Each proposer must be a small business at the time of award of Phase I and Phase II. A small business is defined by the criteria published in 13 C.F.R. § 121.701-705:
  - Must be at least 51 percent owned and controlled by one or more individuals who are citizens of, or permanent resident aliens in the U.S.
  - Must not have more than 500 employees, including its affiliates.
- The principal investigator must be employed with the small business or the research institution. The small business must have at least one employee in a management position whose primary employment is with the small business and who is not also employed by the research institution.
- For both Phase I and Phase II, all R&D work must be performed by the small business and its subcontractors in the U.S.
- The small business must have a written agreement between themselves and the research institution allocating intellectual property rights and rights to carry out follow-on research, development or commercialization.

## SOLICITATION SCHEDULE

Each year, scientists and technologists in the Army Research Centers and Laboratories develop topics that represent the Army's current and anticipated technology requirements. Topics are written to allow maximum flexibility in the proposed solutions. The topics are released in a solicitation that formally opens in mid-May; proposals are due in mid-June. Selections are normally made by the end of September, with an anticipated contract award in December.

Solicitation	Open	Close	Selection
Annual	15 May	15 Jun	30 Sep

## ARMY STTR PARTICIPATING ORGANIZATIONS:

- **U.S. Army Combat Capabilities Development Command (CCDC) Armaments Center:** <https://ac.ccdc.army.mil>
- **CCDC Army Research Laboratory:** <https://www.arl.army.mil>
- **CCDC Aviation and Missile Center (AvMC):** <https://www.avmc.army.mil>
- **CCDC Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance Center (C5ISR):** <https://c5isr.ccdc.army.mil>
- **CCDC Chemical Biological Center (CBC):** <https://www.ecbc.army.mil>
- **Engineer Research and Development Center (ERDC):** <https://www.erdcd.usace.army.mil>
- **Medical Research and Development Command (MRDC):** <https://mrdc.amedd.army.mil>
- **CCDC Soldier Center (SC):** <https://ccdcscsoldiercenter.army.mil>
- **CCDC Ground Vehicle Systems Center (GVSC):** <https://gvsc.army.mil>

For more information, visit <https://www.armysbir.army.mil/sttr> or contact the STTR Program Manager at 919-549-4258 or [usarmy.rtp.aro.mbx.sttr-pmo@mail.mil](mailto:usarmy.rtp.aro.mbx.sttr-pmo@mail.mil).

2018 STATISTICS	
<ul style="list-style-type: none"> <li>• Army STTR Budget: \$35M</li> <li>• 25 Topics</li> <li>• 220 Phase I Proposals</li> <li>• 52 Phase I Awards</li> </ul>	<ul style="list-style-type: none"> <li>• 43 Phase II Proposals</li> <li>• 23 Phase II Awards</li> <li>• 9 Participating Army Components</li> </ul>

## U.S. ARMY TECHNOLOGY TRANSFER ENGAGEMENT PATHWAYS

The Army prescribes Technology Transfer (T2) as an integral component in the development of disruptive technologies for the warfighter. The Army assists industry and academic partners to speed the development and commercialization of military-relevant inventions. The commercial sector can engage with the Army in many ways, including:

### RESEARCH, DEVELOPMENT, TESTING & EVALUATION

- **Cooperative Research and Development Agreements (CRADA)** – Instrument for a Federal Lab to perform collaborative R&D with academic, industrial, not-for-profit and nonfederal government parties. The Federal Lab can provide materials, equipment, access to facilities and expertise, but not money, to the CRADA partner. The CRADA partner can provide the same plus funding to a Federal Lab. CRADA partners receive an option to take an exclusive license to government rights in CRADA-subject inventions within the field of the CRADA.
- **Commercial Test Agreements (CTA)** – Federal Labs test materials, equipment, models, computer software and other technologies on behalf of an outside party. The partner owns the technical data.
- **Broad Agency Announcement (BAA)** – Continuously open solicitations aimed at advancing state-of-the-art technologies.
- **Grants** – Federal funding of R&D by academia, industry and nonprofits. The grant recipient may elect title to and commercialize new inventions created under the grant.
- **Contracts** – Federal funding of R&D by industry. Government retains government use rights for federally funded inventions, but the contractor may retain ownership and commercialize inventions created under the contract.
- **Cooperative Agreements** – Federal lab funding of R&D in academia, industry and nonprofits that leverage Federal lab resources (e.g., materials, equipment, facilities, expertise).
- **Partnership Intermediary Agreements** – Promote cooperative activities between Army Labs and state/local government.
- **Other Transaction Agreements (OTA)** – Instrument for Federal Lab participation in R&D and prototyping collaborations with industry.
- **Rapid Innovation Fund (RIF)** – Accelerate fielding of innovative technologies into military systems; up to \$3M for 24-month period of performance. Annual solicitation on 15 February.
- **Prize Competitions** – Contests open to the public to meet an unmet need of the government.

### INTELLECTUAL PROPERTY AGREEMENTS

- **Non-Disclosure Agreements (NDA)** – Sharing of Proprietary Information between an Army lab and an outside party.
- **License Agreements** – Facilitates transfer of Intellectual Property from a Federal Lab to a commercial partner. Commercial Evaluation Licenses are given for short term evaluation of the commercial potential of a Federal invention.
  - **What is Licensed:** Patents, Copyrights, Trademarks
  - **Types of Exclusivity:** Exclusive\*, Partially Exclusive\* or Nonexclusive (\*requires Federal Register announcement)
  - **Fields of Use:** May be topical, geographical (e.g., U.S. vs. worldwide), or how the invention is used (production vs. testing vs. sales/distribution)
  - **Rights to Sublicense:** May be granted with written approval of the Federal Lab



## BROAD AGENCY ANNOUNCEMENT (BAA)

Broad Agency Announcements (BAA) are continuously open solicitations to increase knowledge in science and/or to advance the state of the art as compared to practical application of the knowledge. Currently open BAAs across the Army Research, Development, Test, and Evaluation enterprise include:

Opportunity Number	Opportunity Title	Agency Name	Agency Contact Email	Posted Date	Close Date
W81XWH-18-S-SOC1	U.S. Army Medical Research and Materiel Command (USAMRMC) BAA for Extramural Biomedical Research and Development	USAMRMC*	help@eBRAP.org	8/1/2018	7/31/2023
W81X-WH18S-BAA1	DoD USAMRMC Fiscal Years 2018-2022 BAA for Extramural Medical Research	USAMRMC*	help@eBRAP.org	10/1/2017	9/30/2022
W911NF-18-S-0005	U.S. Army Research Institute (ARI) for the Behavioral and Social Sciences BAA for Basic, Applied, and Advanced Research (Fiscal Years 2018-2023)	ARI	maria.d.nelson.civ@mail.mil	4/30/2018	4/29/2023
W911NF-17-S-0002	ARI BAA for Fundamental Research	ARO	kia.s.mccormick.civ@mail.mil	4/1/2017	3/31/2022
W911NF-17-S-0003	ARI BAA for Basic and Applied Scientific Research	ARL	kia.s.mccormick.civ@mail.mil	4/1/2017	3/31/2022
W911NF-17-S-0004	AAL BAA for Disruptive Applications	AAL	kia.s.mccormick.civ@mail.mil	5/2/2019	5/1/2024
W911NF-17-R-0001	Defense Forensic Science Center BAA for Basic, Applied, and Advanced Research	AMC	william.a.creech3.civ@mail.mil	10/24/2016	10/15/2021
W56JSR-18-S-0001	U.S. Army Rapid Capability Office (RCO) BAA	ASA(ALT)	megan.c.grigas.civ@mail.mil	3/23/2018	3/23/2023

\*U.S. Army Medical Research and Materiel Command (USAMRMC) has been redesignated as the U.S. Army Medical Research and Development Command (USAMRDC), however these BAA's will retain their original titles until they expire.

More information on BAAs can be found at: <https://www.grants.gov/web/grants/search-grants.html?keywords=BAA>.

## OTHER TRANSACTION AUTHORITY (OTA)

Other Transaction Authority (OTA) authorizes certain research and prototype projects under 10 USC 2371 and 10 USC 2371b. OTAs are not governed by the Federal Acquisition Regulations and are a highly flexible business tool, enabling efficient system acquisitions for the Army.

**OTA Consortia** – The Army leverages OTAs with industry consortia, which are comprised of large/small companies, nonprofits and nontraditional defense contractors. The table below provides the website and contact information for each federal consortium.

Consortium	Website	POC	Email	Phone Number
Border Security Technology Consortium	<a href="https://bstc.ati.org">https://bstc.ati.org</a>	Merv Leavitt	merv.leavitt@ati.org	(571) 814-8345
Consortium for Command, Control, and Communication in Cyberspace (C5)	<a href="https://cmgcorp.org/c5">https://cmgcorp.org/c5</a>	James W. Frankovic	frankovic@cmgcorp.org	(973) 850-4266
Consortium for Energy, Environment and Demilitarization (CEED)	<a href="https://cmgcorp.org/ceed">https://cmgcorp.org/ceed</a>	James W. Frankovic	frankovic@cmgcorp.org	(973) 850-4266
Cornerstone OTA	<a href="http://ibasp-public.ria.army.mil/cornerstone">http://ibasp-public.ria.army.mil/cornerstone</a>	Government	usarmy.ria.rdecom-ecbc.mbx.cornerstone-ota@mail.mil	N/A
Countering Weapons of Mass Destruction (CWMD)	<a href="https://www.cwmdconsortium.org">https://www.cwmdconsortium.org</a>	Mike Stebbins	mike.stebbins@ati.org	(843) 760-4094
Department of Defense Ordnance Technology Consortium (DOTC)	<a href="http://www.nac-dotc.org">www.nac-dotc.org</a>	Diana-Lynn Herbst	dlherbst@cllogicdefense.com	(973) 934-5223
Medical Technology Enterprise Consortium (MTEC)	<a href="https://mtec-sc.org">https://mtec-sc.org</a>	Stacey Lindbergh	stacey.lindbergh@ati.org	(843) 760-3566
Medical Chemical Biological Radiological Nuclear Defense Consortium	<a href="http://www.medcbrn.org">www.medcbrn.org</a>	Robert House	robert.house@ologybio.com	(301) 276-7851
National Advanced Mobility Consortium	<a href="http://www.defensemobility.org">www.defensemobility.org</a>	Alissa Roath	alissar@namconsortium.org	(734) 205-5920
National Spectrum Consortium	<a href="http://www.nationalspectrumconsortium.org">www.nationalspectrumconsortium.org</a>	Apurva Mody	apurva.mody@baesystems.com	(603) 885-2621
NGA Enterprise Innovation Consortium	<a href="https://sossecinc.com">https://sossecinc.com</a>	Debra Paine/ Maureen Levesque	dpaine@sossecinc.com or mlevesque@sossecinc.com	(603) 458-5529
Open Systems Architecture Initiative (OSAI)	<a href="https://sossecinc.com">https://sossecinc.com</a>	Debra Paine/ Maureen Levesque	dpaine@sossecinc.com or mlevesque@sossecinc.com	(603) 458-5529
Space Enterprise Consortium	<a href="https://space-enterprise-consortium.org">https://space-enterprise-consortium.org</a>	Scott Savoie	scott.savoie@ati.org	(843) 760-4356
Training and Readiness Accelerator (TReX)	<a href="https://trainingaccelerator.org">https://trainingaccelerator.org</a>	Tim Greeff	tim@nstl.org	(202) 674-4534
Vertical Lift Consortium	<a href="http://www.verticalliftconsortium.org">www.verticalliftconsortium.org</a>	Nick Lappos	nick.d.lappos@lmco.com	(203) 386-7518

## ARMY LABORATORY ENTERPRISE

Army laboratories work diligently and collaboratively to deliver technology-enabled solutions to the warfighter and the nation. The Army labs welcome collaboration opportunities with the private sector. The Army laboratory network, core research focus areas and points of contact to engage are provided here:



## ARMY LAB TECHNOLOGY TRANSFER POINTS OF CONTACT

Organization	Activity	Contact
HQDA ASA(ALT)	Army Director for Technology Transfer	Matt Willis (703) 697-0682
AFC	Army Futures Command	
CCDC	Combat Capabilities Development Command	Karen Belcastro (410) 306-3038
AvMC	Aviation and Missiles Center	Kelly McGuire (256) 876-8530
AC	Armaments Center	Tim Ryan (973) 724-7953
ARL	Army Research Laboratory	Anmarie Martin (410) 278-9106
C5ISRC	Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance Center	Bruce Testa (443) 861-7666
CBC	Chemical Biological Center	Amanda Hess (410) 436-5406
SC	Soldier Center	Jeff DiTullio (508) 233-4184
GVSC	Ground Vehicle Systems Center	Peter DiSante (586) 282-8958
MRDC	Medical Research and Development Command	Paul Michaels (301) 619-4145
ARI	Army Research Institute (ARI) for Behavioral & Social Sciences	Scott Shadrick (254) 288-3800
ERDC	Army Corps of Engineer's Engineer Research and Development Center	
CERL ITL	Construction Engineering Research Laboratory Information Technology Laboratory	Phoebe Lenear (217) 373-7234
GSL EL CHL	Geotechnical and Structures Laboratory Environmental Laboratory Coastal and Hydraulics Laboratory	Eric Fox (601) 634-4113
GRL CRREL	Geospatial Research Laboratory Cold Regions Research and Engineering Laboratory	Johnette Shockley (402) 554-4979
SMDC/ARSTRAT	Space and Missile Defense Command/Armed Forces Strategic Command	Bernard Kersteins (256) 955-1622
TRADOC	Training and Doctrine Command	Horace Carney (706) 791-9803
USMA	United States Military Academy	Elizabeth Velilla (845) 938-2764

## ARMY RESEARCH LAB OPEN CAMPUS INITIATIVE

The Army Research Lab (ARL) Open Campus links government assets with the global research community, including the formation of a collaborative and transparent relationship with academia, industry and small business to enhance discovery and innovation, and the effective execution of basic and applied research programs in a variety of technical focus areas of high Army interest. The generation of joint intellectual property and incubation of spin-off companies will fast-track technology innovations and the rapid transition of capabilities to the industrial marketplace.

Open Campus lays the foundation for a global Science and Technology (S&T) ecosystem enabling long-term national security. The model is based on three primary tenets: 1) modern government workforce and management; 2) shared facilities between government, academia and the private sector; and 3) a collaborative culture that fosters an entrepreneurial and innovative environment.

The primary mechanisms used to establish Open Campus collaborative partnerships are CRADAs and Educational Partnership Agreements (EPA). CRADAs mediate R&D activities between the Army labs and industry. EPAs are established between ARL and academic institutions to encourage and enhance joint education and research opportunities with academia in science, technology, engineering and mathematics (STEM) disciplines relevant to ARL S&T programs. Under EPAs, visiting students and professors, including those with international citizenship, can access ARL's research facilities and collaborate with subject-matter experts in their fields of interest.

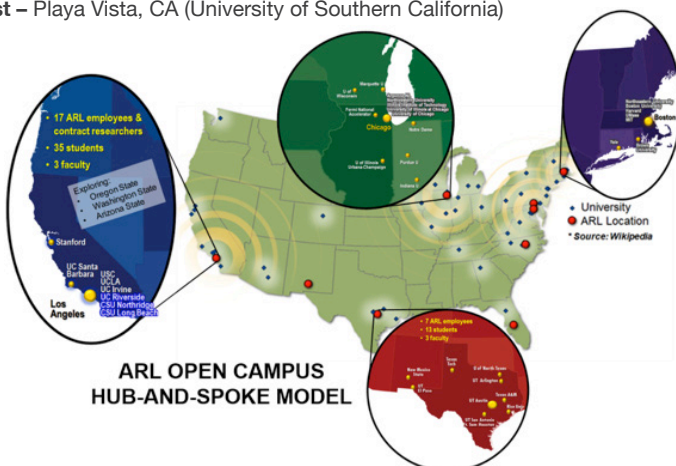
### ARL EXTENDED

ARL Extended, through co-location of Army R&D personnel, and close collaboration on research and innovation activities, is an effort to create strong, enduring S&T partnerships—working together to solve the Army's current and future challenges.

Through the Open Campus initiative, ARL Extended will leverage regional expertise and facilities to accelerate the discovery, innovation and transition of S&T. Close collaboration with universities, start-ups and established companies working in regionally specific technical subject areas will directly benefit the Soldier and ensure our nation's future strength and competitiveness in critical scientific engineering and the creative fields.

ARL Extended sites include:

- **ARL Central** – Chicago, IL (University of Chicago)
- **ARL Northeast** – Burlington, MA (Northeastern University)
- **ARL South** – Austin, TX (University of Texas – Austin)
- **ARL West** – Playa Vista, CA (University of Southern California)



## ARMY RESEARCH LAB CENTERS

As another means to advance collaborative fundamental research, ARL has initiated 15 research centers. These centers are being established as a consortium of Open Campus partner organizations leveraging expertise, facilities and capabilities on an international scale to address challenging research problems critical to the U.S. Army and National Security. Each center is seeking active partners (individuals and organizations) that have mutual interest in the technical focus area.

ARL Centers include:

- Atmospheric Science Center (ASC)
- Center for Adaptive Instructional Sciences (CAIS)
- Center for Adaptive Soldier Technologies (CAST)
- Center for Agile Materials Manufacturing Science (CAMMS)
- Center for Cyber Analysis and Assessment (CCAA)
- Center for Human Injury and Performance (CHIP)
- Center for Impact Physics (CIP)
- Center for Research in Extreme Batteries (CREB)
- Center for Semiconductor Modeling of Materials and Devices (CSDM)
- Center for UAS Propulsion (CUP)
- Cyber Research Center (CRC)
- Intelligent Systems Center (ISC)
- Network Science Research Center (NSRC)
- Novel Energetics Research Center (NERC)
- Semiconductor Research Nanofab Center (SRNC)

For more information, please contact [opencampus@arl.army.mil](mailto:opencampus@arl.army.mil).

## XTECHSEARCH

### Army Expeditionary Technology Search



**Innovation Ecosystem.** The xTechSearch is a prize competition sponsored by the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)) under Title 15 USC §3719 to link small businesses, and other nontraditional defense partners within the innovation community, directly with the Army laboratory enterprise, with a focus on cutting bureaucracy, lowering entrance barriers to engage with the Army and spurring innovation.

**We can't plan revolutionary change.** xTechSearch seeks to identify paradigm breaking technologies to generate technology surprise for the U.S. Army, complementary to the Army's Modernization Priorities including: Long Range Precision Fires, Next Generation Combat Vehicles, Future Vertical Lift, Army Network, Air and Missile Defense, and Soldier Lethality.

#### xTechSearch Competition (\$2M prize purse):

- **Phase I:** Concept Papers
- **Phase II:** Technology Pitches
- **Phase III:** Association of the United States Army Innovators' Corner Exhibitions
- **Phase IV:** Capstone "Proof of Concept" Demonstrations

#### xTechSearch Competitions:

- **v 1.0: Completed March 2019**
- **v 2.0: December 2018 – October 2019**
- **v 3.0: June 2019 – March 2020**
- **v 4.0: October 2019 – October 2020**

**Path Forward:** ASA(ALT) is driving towards the establishment of an innovation ecosystem to foster engagement activities with traditional and nontraditional defense partners. Engagement opportunities include prize competitions (broad spectrum technology search and targeted specialties), dilutive (equity) and non-dilutive capital (forgivable loans, proof of concept grants), sponsored research platform at Army laboratory facilities, and partnerships with the Army Futures Command and Open Campus sites.

For more information, visit the xTechSearch website at <https://www.xtechsearch.army.mil/> or email the xTechStaff at: [usarmy.pentagon.hqda-asalt.mbx.xtechsearch@mail.mil](mailto:usarmy.pentagon.hqda-asalt.mbx.xtechsearch@mail.mil).

*"Having come from industry and knowing the challenges associated with entering 'the process,' we must proactively and aggressively engage with innovators to see what new ideas, concepts, systems, and sub-system components they can bring to the table."*

Dr. Bruce D. Jette, Assistant Secretary of the Army for Acquisition, Logistics and Technology



## Additional Resources

For more information on how to do business with ASA(ALT) please visit the Guide to DoD Contracting Opportunities at:

[https://www.acq.osd.mil/dpap/cpic/cp/docs/Doing\\_Business\\_with\\_DoD\\_\(18\\_sep\\_2018\).pdf](https://www.acq.osd.mil/dpap/cpic/cp/docs/Doing_Business_with_DoD_(18_sep_2018).pdf)



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